

**FINAL REPORT FOR THE SAMPLES RECEIVED IN
MARCH, 2010, FOR SAF F09-070**

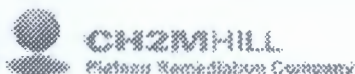
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SDG: 222S20100265**

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Advanced Technologies and Laboratories International, Inc.

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Prepared for:

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222-S LABORATORY**FINAL REPORT FOR SAMPLES RECEIVED IN MARCH, 2010,
FOR SAF F09-070****1.0 INTRODUCTION**

This final report presents the result for one ground water sample taken on March 10, 2010. The sample was analyzed in accordance with Sampling Authorization Form F09-070; *ARRA-HR-3 Remedial Process Optimization Wells-QC (SAF)*; and ATL-MP-1011; *ATL Quality Assurance Project Plan for 222-S Laboratory (QAPP)*. The following attachments are included in this report.

Attachment 1	Data Summary Report
Attachment 2	Holding Time Report
Attachment 3	Receipt Paperwork

2.0 SAMPLE RECEIPT AND HANDLING

The sample was received on March 10, 2010, with adequate paperwork. The sample did not show evidence of cooling. The measured temperature of the outside of the sample container was 18 °C. This was reported to the client on the laboratory's sample receipt check list (see Attachment 3).

3.0 ANALYTICAL RESULTS SUMMARY

The Data Summary Report (Attachment 1) presents the final analytical results. The "Det Limit" column in Attachment 1 contains the method detection limit (MDL).

In Attachment 1, the column labeled "A#" indicates the aliquot class or the method used for sample preparation before analysis. For analysis without a preparation step, this column is left blank.

The "Qual Flags" column in Attachment 1 contains data qualifier flags that are defined as follows:

- "B" indicates that the reported result is greater than the method detection limit (MDL) and less than the estimated quantitation limit (EQL).

Manual calculations using rounded results from the Data Summary Report or result calculation forms may differ slightly from the actual results derived from the raw data.

3.1 ANALYSES**3.1.1 Hexavalent Chromium by Spectrophotometric Determination**

The hexavalent chromium analysis was performed on direct aliquots of the sample. All requirements in the SAF and QAPP were met. The result for sample B23PW9 was above the detection limit but less than estimated quantitation limit. A "B" flag was applied to the sample

result. The result for the sample duplicate was less than the detection limit. Therefore, the RPD calculation is not applicable.

4.0 PROCEDURES

Table 1 lists the analytical procedure used for analysis of this sample.

Table 1. Analytical Procedures.

Analysis	Preparation Method	Analysis Procedure
Hexavalent Chromium Analysis by Spectrophotometric Determination	NA	SW846-7196A

5.0 REFERENCES

ATL-MP-1011, 2009, *ATL Quality Assurance Project Plan for 222-S Laboratory*, Rev. 9, Applied Technologies and Laboratories International, Inc., Richland, Washington.

Sampling Authorization Form F09-070, *ARRA 100-HR-3 Remedial Process Optimization Wells-QC*, 2009, CH2M Hill, Plateau Remediation Company, Richland, Washington

Attachment 1

DATA SUMMARY REPORT

20100265

WSCF - Anions & HexCr
Data Summary of All Results

Sample Group: 20100265

Customer Group or SDG Number: 222S2010265

Customer Sample ID: B23PW9

Customer Sample ID: B23PW9

Sample#	R	A#	CAS #	Analyte	Unit	STD %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Cnt Err %	Qual Flags
S10M000161			18540-29-9	Hexavalent Chromium	ug/mL	99.8	<9.00E-03	1.09E-02	<9.68E-03	n/a	n/a	111	9.68E-03	n/a	B

NA = Not Analyzed, ND = Not Detectec

B - Estimated

20100265

Attachment 2

HOLDING TIME REPORT

20100265

Holding Time Report

SDG No 222S20100265

Sample Group	Sample	Matrix	Method	Sample Date	Received Date	Analysis Date	Missed Holding Time
20100265	S10M000161	LIQUID	SW846-7196A	03/10/10 08:45	03/10/10 09:15	03/10/10 18:32	N

20100265

Attachment 3

RECEIPT PAPERWORK

ATL	SAMPLE RECEIPT AND CHAIN OF CUSTODY VERIFICATION CHECKLIST		LO-090-101 Rev <u>DP.1</u>
Date Samples Received: <u>3.10.10</u>		Group #: <u>201000265</u>	
Number of Samples: <u>2</u>			
Sample Custodian: <u>statal</u>			
Sample Custodian to Complete:			
Action	OK? (Y/N)	N/A	Comments
RSA/COC provided?	✓		
RSR provided?		✓	
Verify GKI is complete	✓		<u>on file</u>
Check that outer custody seal is intact, if present			
Record cooler temperature in centigrade, as appropriate	<u>18°C</u>		<input type="checkbox"/> Check if no cooler and/or no ice
Samples are intact and in good condition			If No, provide comments on back
Verify that COC or RSA is accurate and complete, containing the following information:			
• Client name and client sample number	✓		
• Date and time of sampling	✓		
• Sampling location or origin	✓		
• Container type, size, and number	✓		
• Analysis request is clear	✓		
• Signature of persons relinquishing and receiving samples	✓		
• Date and/or time of sample custody exchange	✓		
Verify that sample numbers on containers match the COC and/or RSA	✓		
Samples stored properly (e.g. <u>refrigeration</u>)			<u>ZB 4# REF</u>
Notify the PM immediately if any problems are noted. (A "No" answer requires Project Manager resolution.)			
PM to Complete:			
Samples acceptable for release? <u>yes</u>		PM Initials <u>RA</u>	Date <u>3-10-10</u>
If No, comment on communication and resolution:		<u>for JR Ritenour</u>	
Other Comments:			

CH2M Hill Plateau Remediation Company		20100265 CHAIN OF CUSTODY / SAMPLE ANALYSIS REQUEST				F09-070-022		PAGE 1 OF 1	
COLLECTOR <i>Chacon</i>		COMPANY CONTACT DYEKMAN, DL		TELEPHONE NO. 373-2530		PROJECT COORDINATOR DYEKMAN, DL		PRICE CODE 1A	
SAMPLING LOCATION C7590 (199-D5-130); 1-001EB		PROJECT DESIGNATION ARRA 100-HR-3 Remedial Process Optimization Wells - QC				SAF NO. F09-070		AIR QUALITY <input type="checkbox"/>	
ICE CHEST NO.		FIELD LOGBOOK NO.		ACTUAL SAMPLE DEPTH <i>N/A</i>		COA 302160ES10		METHOD OF SHIPMENT GOVERNMENT VEHICLE	
SHIPPED TO Waste Sampling & Characterization <i>222-5</i> <i>3/18/10</i>		OFFSITE PROPERTY NO. N/A				BILL OF LADING/AIR BILL NO. N/A			
MATRIX* A=Air DL=Drum L=Liquid DS=Drum S=Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other		POSSIBLE SAMPLE HAZARDS/ REMARKS Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993) <i>18°C</i>		PRESERVATION Cool--4C					
		SPECIAL HANDLING AND/OR STORAGE		TYPE OF CONTAINER		aG			
				NO. OF CONTAINER(S)		1			
				VOLUME		500mL			
				SAMPLE ANALYSIS		Chromium Hex - 7196 (Hexavalent Chromium)			
SAMPLE NO.		MATRIX*		SAMPLE DATE	SAMPLE TIME				
B23PW9		WATER		3/10/10	0845	✓			
<i>Group # 201000265</i> <i>Sample # 310M000161</i>									
CHAIN OF POSSESSION				SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS			
RELINQUISHED BY/REMOVED FROM		DATE/TIME		RECEIVED BY/STORED IN		DATE/TIME		** The CACN for all analytical work at WSCF laboratory is 401649ES20. ** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.	
<i>W. L. Libal</i>		3/10/10 0915		<i>W. L. Libal</i>		3/10/10 9:15			
RELINQUISHED BY/REMOVED FROM		DATE/TIME		RECEIVED BY/STORED IN		DATE/TIME			
RELINQUISHED BY/REMOVED FROM		DATE/TIME		RECEIVED BY/STORED IN		DATE/TIME			
RELINQUISHED BY/REMOVED FROM		DATE/TIME		RECEIVED BY/STORED IN		DATE/TIME			
RELINQUISHED BY/REMOVED FROM		DATE/TIME		RECEIVED BY/STORED IN		DATE/TIME			
RELINQUISHED BY/REMOVED FROM		DATE/TIME		RECEIVED BY/STORED IN		DATE/TIME			
RELINQUISHED BY/REMOVED FROM		DATE/TIME		RECEIVED BY/STORED IN		DATE/TIME		<div style="text-align: center;"> </div>	
RELINQUISHED BY/REMOVED FROM		DATE/TIME		RECEIVED BY/STORED IN		DATE/TIME			
LABORATORY SECTION		RECEIVED BY				TITLE		DATE/TIME	
FINAL SAMPLE DISPOSITION		DISPOSAL METHOD				DISPOSED BY		DATE/TIME	

20100265

222-S

WRPS, P. O. Box 850

Richland, WA

Phone: (509) 376-5029 / FAX: (509) 372-1878

ACKNOWLEDGMENT OF SAMPLES RECEIVED

Sample Group: 20100265 - CACN/COA 75A/401649

Specification Entity: WSCF - Anions & HexCr

The following samples were received from you on 03/10/2010. They have been scheduled for the tests listed beside each sample. If this information is incorrect, please contact your service representative. Thank you for using 222-S.

Sample	Customer Sample ID	Matrix	Sample Date
Tests Scheduled			
S10M000160	B23PW8	LIQUID	03/10/2010
IC - ANIONS	<i>Cancelled per 3-17-10</i>		
S10M000161	B23PW9	LIQUID	03/10/2010
CHROMIUM VI			

Test Acronym Description

Test Acronym	Description
CHROMIUM VI	Chromium (VI) by Spec.
IC - ANIONS	Anions by IC SW846

GENERATOR KNOWLEDGE INFORMATION

1. Chain of Custody Number NA CACN/COA NA Customer Identification Number NA2. List generator knowledge or description of process that produced sample. Or list description of sample source:
100 Area S&GRP Characterization and Monitoring Sampling and AnalysisMSDS Available? ☒ No ☐ Yes Hanford MSDS No: _____

3. List all waste codes and constituents associated with the waste or media that was sampled, regardless of CERCLA status.

a) Does the sample contain any of the following listed waste codes?

By checking "unknown" the customer understands that no knowledge is available following a careful search.

List Federal Waste Code(s):

List Constituent(s):

P Codes: _____ ☐ Yes ☒ No ☐ UnknownU Codes: _____ ☐ Yes ☒ No ☐ UnknownK Codes: _____ ☐ Yes ☒ No ☐ UnknownF Codes: _____ ☐ Yes ☒ No ☐ Unknown

b) List applicable characteristic waste codes, flash point, pH, constituents, and concentrations as appropriate.

D001: ☐ FP <100°F ☐ FP ≥100 <140°F ☐ DOT Oxidizer ☐ Yes ☒ No ☐ UnknownD002: ☐ pH ≤2 ☐ pH ≥12.5 ☐ Solid Corrosive (WSC2) ☐ Yes ☒ No ☐ UnknownD003: ☐ Cyanide ☐ Sulfide ☐ Water Reactive ☐ Other ☐ Yes ☒ No ☐ UnknownD004-D043 (Identify applicable waste codes and concentrations): _____ (i.e., peroxide former, explosive, air reactive) ☐ Yes ☒ No ☐ Unknown

N/A

c) If characteristic, list any known underlying hazardous constituents (UHCs) reasonably expected to be present, and their concentrations that may be present above the LDR treatment standard (40 CFR 268.48):

N/A

d) List any known Land Disposal Restrictions (LDR) subcategories, if applicable (40 CFR 268.40):

N/A

e) List any applicable Washington State dangerous waste codes: (not required if federally regulated)

WT01: ☐ Yes ☒ No ☐ UnknownWT02: ☐ Yes ☒ No ☐ UnknownW001: ☐ Yes ☒ No ☐ Unknown

List constituents and concentrations:

N/A

(*State mixture rule for ignitability)

WP01: ☐ Yes ☒ No ☐ UnknownWP02: ☐ Yes ☒ No ☐ UnknownWP03: ☐ Yes ☒ No ☐ UnknownF003: ☐ Yes ☒ No ☐ Unknown4. Is this material TSCA regulated for PCBs? ☐ Yes ☒ No ☐ Unknown ☐ Analysis Requested

List concentration if applicable: _____

If yes, what is the source of the PCBs? (see TSCA PCB Hanford Site User Guide, DOE/RL-2001-50)

☐ PCB Liquid Waste ☐ PCB Bulk Product Waste ☐ PCB Transformer ≥500 ppm ☐ Unknown
☐ PCB Remediation Waste ☐ PCB R&D Waste ☐ PCB contaminated electrical equipment (capacitor/ballast) <500 ppm
☐ PCB Spill Material ☐ PCB Item ☐ Other PCB Waste (list) _____
5. Is this material TRU? ☐ Yes ☒ No ☐ Unknown

6. ACCURACY OF INFORMATION

Based on my inquiry of those individuals immediately responsible for obtaining this information, that to the best of my knowledge, the information entered in this document is true, accurate, and complete.

Print & Sign

SJ TRENT/ [Signature]

Date

12/3/07